EXHIBIT 4

U.S. Patent No. 7,594,249 ("the '249 Patent") Exemplary Infringement Chart

The Accused MoCA Instrumentalities are instrumentalities that Charter deploys to provide a whole-premises DVR network over an on-premises coaxial cable network, with devices operating with data connections compliant with MoCA 1.0, 1.1, and/or 2.0. The Accused MoCA Instrumentalities include the Charter Arris DCX3510, Charter Arris DCX3520, Charter Arris DCX3600, Charter Arris DCX3200, Charter Arris DCX3220, and substantially similar instrumentalities. Charter literally and/or under the doctrine of equivalents infringes the claims of the '249 Patent under 35 U.S.C. § 271(a) by making, using, selling, offering for sale, and/or importing the Accused MoCA Instrumentalities.

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10. A broadband local area network for transmitting modulated signals using coaxial cable building wiring containing a plurality of branches comprising:	The Accused Services are provided using at least the Accused MoCA Instrumentalities including gateway devices (including, but not limited to, the Charter Arris DCX3510, Charter Arris DCX3520, Charter Arris DCX3600, and devices that operate in a similar manner), client devices (including, but not limited to, the Charter Arris DCX3200, Charter Arris DCX3220, and devices that operate in a similar manner), and substantially similar instrumentalities. The Accused MoCA Instrumentalities operate to form a broadband local area network for transmitting modulated signals using coaxial cable building wiring containing a plurality of branches as described below. The Charter full-premises DVR network constitutes a broadband local area network as claimed. The Charter full-premises DVR network is a MoCA network created between gateway devices and client devices using the on-premises coaxial cable network. This MoCA network is compliant with MoCA 1.0, 1.1, and/or 2.0. "The MoCA system network model creates a coax network which supports communications between a convergence layer in one MoCA node to the corresponding convergence layer in another MoCA node."

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	(MoCA 1.0, Section 1. *See also* MoCA 1.1, Section 1.1; MoCA 2.0, Section 1.2.2) "The MoCA Network transmits high speed multimedia data over the in-home coaxial cable infrastructure." (MoCA 1.0, Section 2. *See also* MoCA 1.1, Section 2; MoCA 2.0, Section 5) "The MoCA Network transmits high speed multimedia data over the in-home coaxial cable infrastructure." (MoCA 1.0, Section 2. *See also* MoCA 1.1, Section 2; MoCA 2.0, Section 5) "The MoCA physical layer (PHY) utilizes a modulation technique named Adaptive Constellation Multi-tone (ACMT). ACMT is a variation of orthogonal frequency division multiplexing (OFDM) where knowledge of the channel is used to pre-equalize all signals using variable bitloading on all subcarriers." (MoCA 1.0, Section 2.2. *See also* MoCA 1.1, Section 2.2; MoCA 2.0, Section 5) Charter utilizes the MoCA standard to provide an on-premises DVR network over an on-premises coaxial cable network as shown below:

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	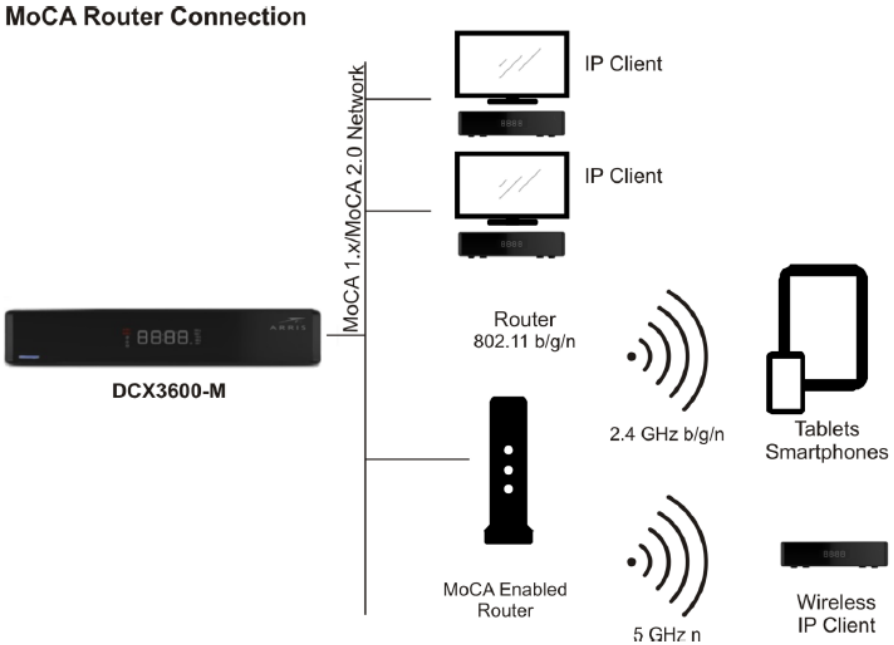 Figure 5 - A Typical Mixed MoCA/WiFi Home Network
a filter located at the point of entry of the building wiring that rejects network signals originating in the building wiring such that the rejected network signals do not pass through the filter, but rather are reflected by the filter back into all branches of the building wiring;	The Accused MoCA Instrumentalities operate to form a broadband local area network having a filter located at the point of entry of the building wiring that rejects network signals originating in the building wiring such that the rejected network signals do not pass through the filter, but rather are reflected by the filter back into all branches of the building wiring as described below. For example, as shown below and on informed belief, the Charter on-premises DVR network includes at least a filter located at the point of entry of the building wiring that rejects network signals originating in the building wiring such that the

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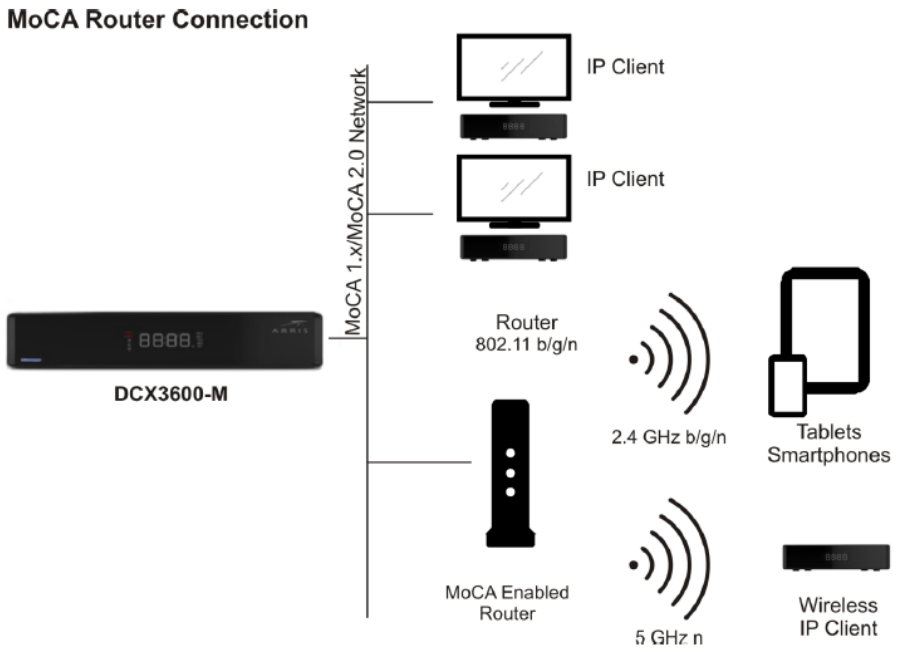
	rejected network signals do not pass through the filter, but rather are reflected by the filter back into all branches of the building wiring  Figure 5 - A Typical Mixed MoCA/WiFi Home Network "The MoCA system network model creates a coax network which supports communications between a convergence layer in one MoCA node to the corresponding convergence layer in another MoCA node." (MoCA 1.0, Section 1. *See also* MoCA 1.1, Section 1.1; MoCA 2.0, Section 1.2.2)

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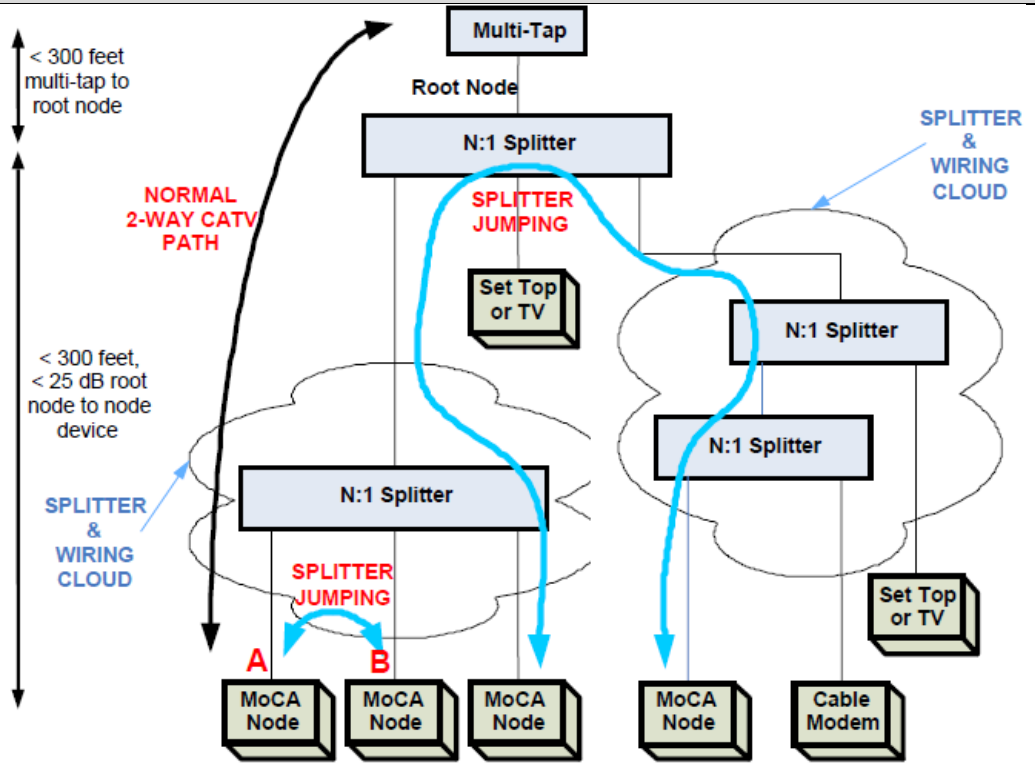

Figure 2-1. A Typical In-home Cable Network

(MoCA 1.0, Figure 2-1. *See also* MoCA 1.1, Figure 2-1; MoCA 2.0, Figure 1-1)

"Because of the effects of splitter jumping and reflections, the channel characteristics for a link between two nodes may be dramatically different than a link between any other two nodes. Channel characteristics are also sensitive to the direction of the communication, so a reverse path may be different than the forward path."

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	(MoCA 1.0, Section 2.1.2. See also MoCA 1.1, Section 2.1.2; MoCA 2.0, Section 1.2.2) "Device performance may be dependent on filters required by the vendor which are external to the main enclosure of the MoCA device. In such cases the vendor may install the filters to meet the required performance specified in this section." (MoCA 1.0, Section 8. *See also* MoCA 1.1, Section 8; MoCA 2.0, Section 15)
at least one signal splitter;	The Accused MoCA Instrumentalities operate to form a broadband local area network having at least one signal splitter as described below. For example, as shown below and on informed belief, the Charter on-premises DVR network includes at least one signal splitter.

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	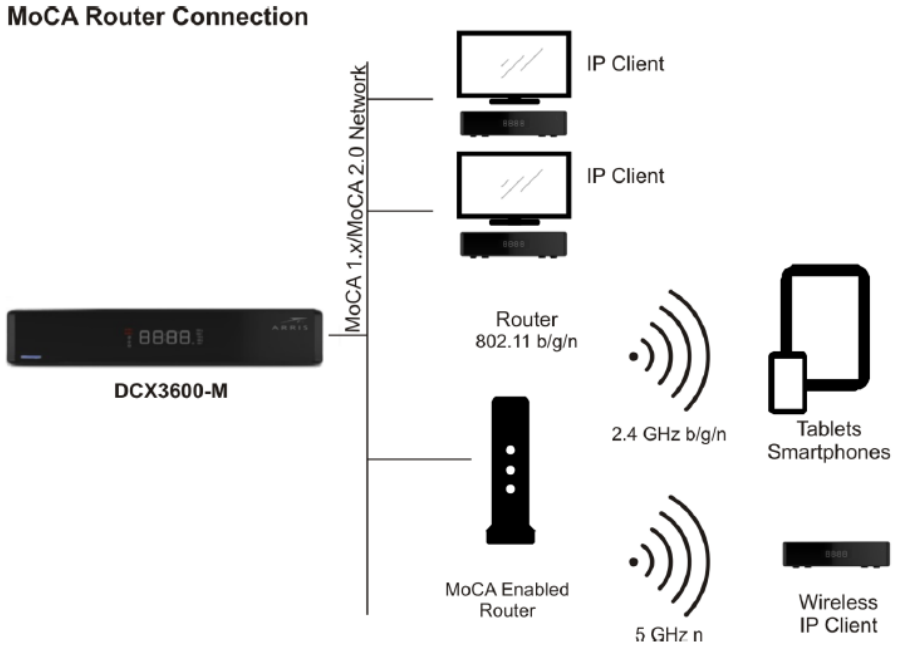 Figure 5 - A Typical Mixed MoCA/WiFi Home Network "Typical in-home coaxial networks are configured as a branching tree topology with the point of demarcation being at the point of entry, typically on the side of the house, and outlets distributed throughout the house. The point of entry is typically connected to the first splitter in the home through a coax cable. In order to get MSO services, the point of entry must be connected to a multi-tap in the MSO's coax distribution plant. In this document, the point of connection to the first splitter is called the root node. The MoCA devices inside the home communicate with each other by having their signals traverse across one or more

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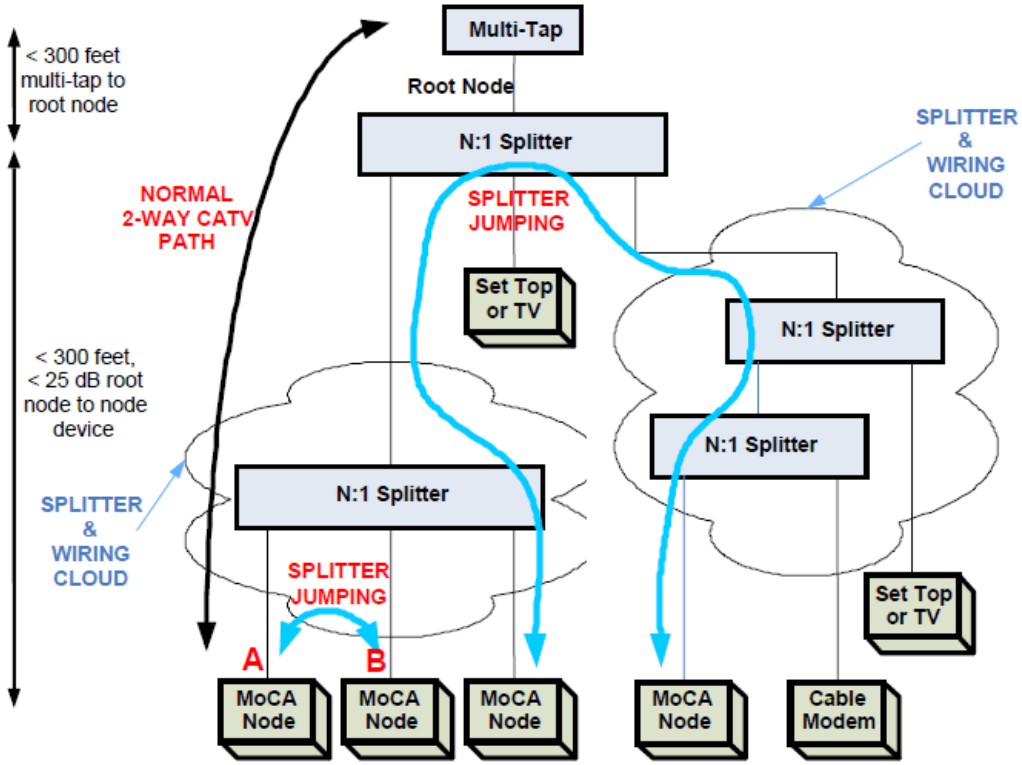
	splitters. When the signal traverses between two outputs of a single splitter, this is referred to as 'splitter jumping'. Splitter jumping is always necessary when the signal must traverse between outlets in the home." (MoCA 1.0, Section 2.1.1. *See also* MoCA 1.1, Section 2.2.1; MoCA 2.0, Section 1.2.2)  **Figure 2-1. A Typical In-home Cable Network** (MoCA 1.0, Figure 2-1. *See also* MoCA 1.1, Figure 2-1; MoCA 2.0, Figure 1-1)

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a plurality of terminal devices connected to the wiring branches, each terminal device capable of communicating with other terminal devices the reflected signal path created by the filter, wherein the terminal devices perform equalization on the received signal that restores a flat frequency response to overcome communication channel impairments caused by the reflected signals.	The Accused MoCA Instrumentalities operate to form a broadband local area network with a plurality of terminal devices connected to the wiring branches, each terminal device capable of communicating with other terminal devices the reflected signal path created by the filter, wherein the terminal devices perform equalization on the received signal that restores a flat frequency response to overcome communication channel impairments caused by the reflected signals as described below. For example, the Accused MoCA Instrumentalities constitute terminal devices connected to the wiring branches and capable of communicating with other terminal devices the reflected signal path created by the filter. By virtue of their compliance with MoCA, the Accused MoCA Instrumentalities include circuitry and/or associated software modules that perform equalization on the received signal that restores a flat frequency response to overcome communication channel impairments caused by the reflected signals.

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	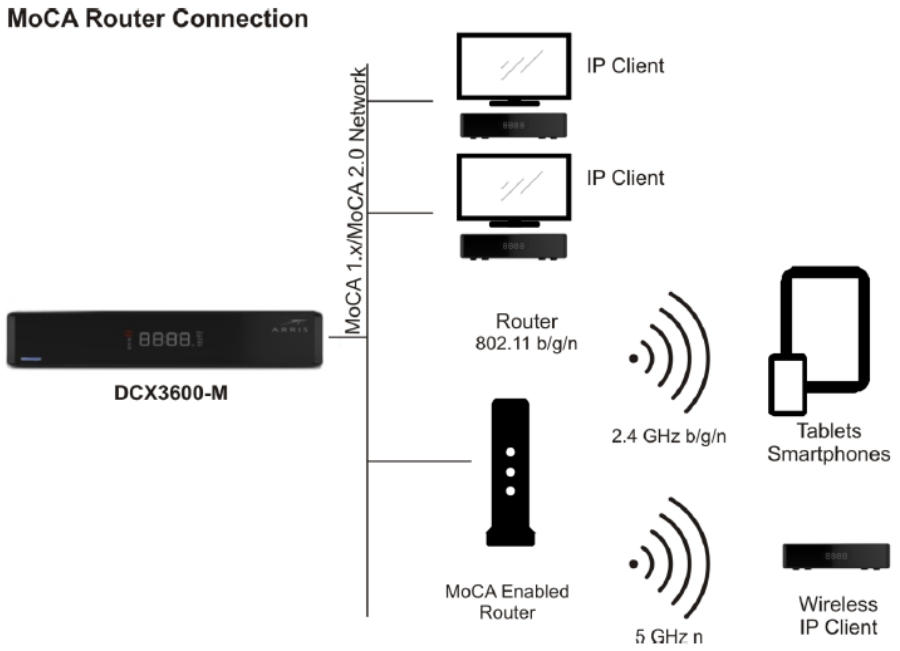 Figure 5 - A Typical Mixed MoCA/WiFi Home Network

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	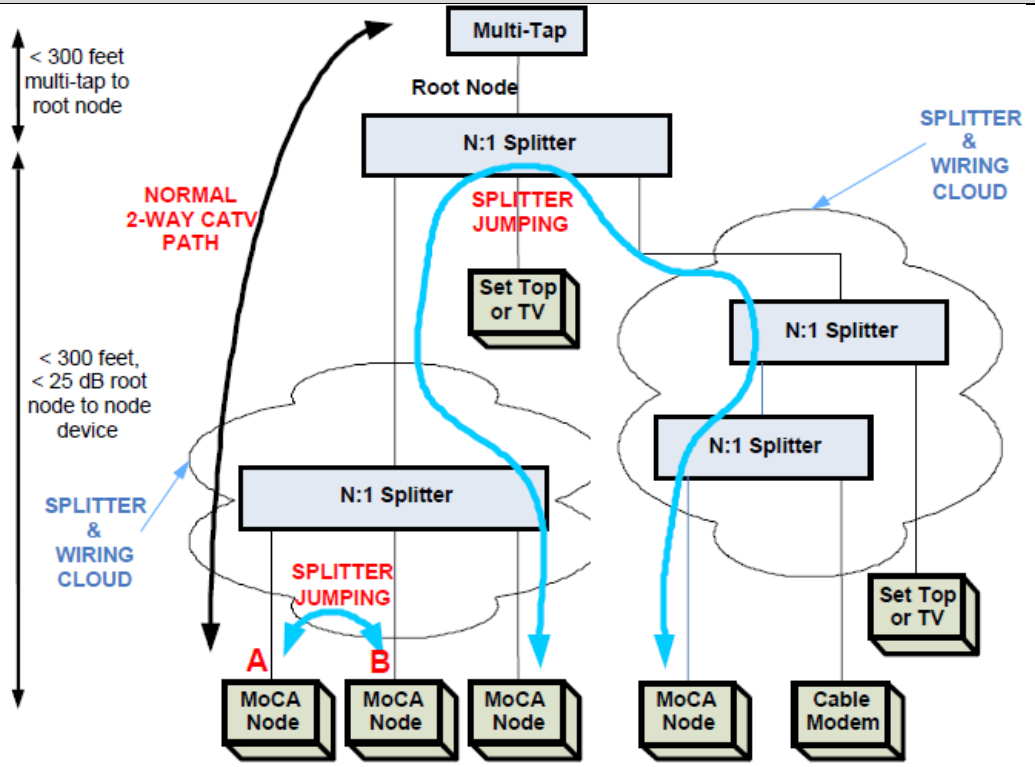 Figure 2-1. A Typical In-home Cable Network (MoCA 1.0, Figure 2-1. *See also* MoCA 1.1, Figure 2-1; MoCA 2.0, Figure 1-1) "The MoCA physical layer (PHY) utilizes a modulation technique named Adaptive Constellation Multi-tone (ACMT). ACMT is a variation of orthogonal frequency division multiplexing (OFDM) where knowledge of the channel is used to pre-equalize all signals using variable bitloading on all subcarriers."

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	(MoCA 1.0, Section 2.2. *See also* MoCA 1.1, Section 2.2; MoCA 2.0, Section 5) "ACMT uses multicarrier transmission, much like OFDM." (MoCA 1.0, Section 4.3.6. *See also* MoCA 1.1, Section 4.3.6; MoCA 2.0, Section 5.2) "While it is physically a shared medium, the logical network model is a fully meshed collection of point-to-point links, each with its own unique channel characteristics and channel capacity. MoCA devices use optimized PHY parameters between every point to point link. Each set of optimized PHY parameters is called a PHY Profile. Because each link is unique, it is critical that all nodes know the source and the destination for every transmission." (MoCA 1.0, Section 2.1.2. *See also* MoCA 1.1, Section 2.1.2; MoCA 2.0, Section 1.2.2) "The topology of the in-home coax typically results in a multi-path delay profile. Because the echoes can be stronger and/or weaker than the original signal, depending on the output port-to-output port isolation of the jumped splitter, the channel is said to have either pre- or post-echoes, respectively. A zero decibel echo, i.e., equal power to the main path, leads to deep nulls in the frequency domain spectrum. In order to achieve target packet error rates of less than 10^{-5} for large packets (>1500 bytes) with no retransmissions, the MoCA physical layer uses channel pre-equalization (using bit loading) and multi-tone modulation on all links." (MoCA 1.0, Section 2.2. *See also* MoCA 1.1, Section 2.2; MoCA 2.0, Section 5.2) "ACMT is a variation of orthogonal frequency division multiplexing (OFDM)

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	where knowledge of the channel is used to pre-equalize all signals using variable bitloading on all subcarriers. The term used to describe the bitloading of the ACMT subcarriers is "modulation profile" and the process of creating a modulation profile between a node pair is called "modulation profiling". During periodic modulation profiling, probes are sent between all nodes and analyzed. After probe analysis, modulation profiles are chosen to optimize individual link throughput while maintaining a low packet error rate." (MoCA 1.0, Section 2.2. *See also* MoCA 1.1, Section 2.2; MoCA 2.0, Section 5)